

Docket No.: 0171-1248PUS1

(PATENT)

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Kensuke ITAKURA et al.

Application No.: 10/559,999

Filed: December 9, 2005

For: POWDERS, FLAKES, OR PELLETS

CONTAINING SALTS OF  $\alpha$ -SULFO FATTY

ACID ALKYL ESTERS IN HIGH CONCENTRATIONS, PROCESS FOR

PRODUCTION THEREOF, GRANULATED

DETERGENTS, AND PROCESS FOR

PRODUCTION THEREOF

Confirmation No.: 4595

Art Unit: 1751

Examiner: Not Yet Assigned

### **LETTER**

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

Subsequent to the filing of the above-identified application on December 9, 2005, attached hereto is an International Preliminary Examination Report (Form PCT/ISA/237) and an English translation thereof that should be made of record in the present application.

Application No.: 10/559,999 Docket No.: 0171-1248PUS1

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or to credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Dated: JUN 1 4 2006

Respectfully submitted,

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Attachment(s)

RECEIPT ACKNOWLEDGED

#### 発信人 日本国特許庁 (国際調査機関)

2004, 11, 04 出願人代理人 PATENT OFFICE 小島 隆司 様 あて名 PCT T 104-0061 国際調査機関の見解書 (法施行規則第40条の2) 東京都中央区銀座二丁目16番12号 [PCT規則43の2.1] 銀座大塚ビル2階 発送日 (日.月.年) 今後の手続きについては、下記2を参照すること。 出願人又は代理人 の書類記号 FAP-3882 国際出願日 優先日 国際出願番号 (日.月.年)  $1\ 2.\ 0\ 6.\ 2\ 0\ 0\ 3$ PCT/JP2004/008563 (日.月.年) 11.06.2004 国際特許分類 (IPC) Int. Cl' C11D 1/28, 11/04, 17/06 出願人(氏名又は名称) ライオン株式会社 1. この見解書は次の内容を含む。 X 第 I 欄 見解の基礎 第Ⅱ欄 優先権 第Ⅲ欄 新規性、進歩性又は産業上の利用可能性についての見解の不作成 第IV欄 発明の単一性の欠如 第V欄 PCT規則43の2.1(a)(i)に規定する新規性、進歩性又は産業上の利用可能性についての見解、 X それを裏付けるための文献及び説明 第VI欄 ある種の引用文献 第VII欄 国際出願の不備  $\mathbf{x}$ 第VII欄 国際出願に対する意見 2. 今後の手続き 国際予備審査の請求がされた場合は、出願人がこの国際調査機関とは異なる国際予備審査機関を選択し、かつ、その国 際予備審査機関がPCT規則66.1の2(b)の規定に基づいて国際調査機関の見解書を国際予備審査機関の見解書とみなさ

見解書を作成した日		
14.09.2004		
名称及びあて先	特許庁審査官(権限のある職員)	4 V 9 3 6 0
日本国特許庁 (ISA/JP) 郵便番号100-8915	井上典之	
東京都千代田区霞が関三丁目4番3号	電話番号 03-3581-1101	内線 3483

ない旨を国際事務局に通知していた場合を除いて、この見解書は国際予備審査機関の最初の見解書とみなされる。

この見解書が上記のように国際予備審査機関の見解書とみなされる場合、様式PCT/ISA/220を送付した日から3月又は優先日から22月のうちいずれか遅く満了する期限が経過するまでに、出願人は国際予備審査機関に、適当

な場合は補正書とともに、答弁書を提出することができる。

さらなる選択肢は、様式PCT/ISA/220を参照すること。

3. さらなる詳細は、様式PCT/ISA/220の備考を参照すること。

第I欄	見解の基礎				
1. z o	見解書は、下	記に示っ	場合を除くほか、国際出願の言語を	基礎として作成された。	·
	この見解書は、 それは国際調査	のため	語による翻訳文を基礎 提出されたPCT規則12.3及び23.	として作成した。 1(b)にいう翻訳文の言語であ	>5.
	)国際出願で開 に基づき見解		つ請求の範囲に係る発明に不可欠な した。	ヌクレオチド又はアミノ酸面	別に関して、
a . 夕	<b>ツ</b> イプ		2列表		
			2列表に関連するテーブル		٠.
b. 7	フォーマット		李面		
			コンピュータ読み取り可能な形式		
c. 拼	是出時期	•	出願時の国際出願に含まれる		•
	:		の国際出願と共にコンピュータ読	み取り可能な形式により提出	された
			出願後に、調査のために、この国際 ・	調査機関に提出された	
3.	さらに、配列 た配列が出願 あった。	表又はi 時に提	列表に関連するテーブルを提出した した配列と同一である旨、又は、出	- 場合に、出願後に提出した配 出願時の開示を超える事項を含	2列若しくは追加して提出し 5まない旨の陳述書の提出が
4.補足	· 足意見:				
		•			
l					•
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l .					
					•
			•		

### 国際調査機関の見解書

第V欄	新規性、進歩性又は産業上の利用可能性についてのPCT規則43の2.1(a)(i)に定める見解、
	それを裏付る文献及び説明

#### 1. 見解

•	•		·		
新規性(N)	請求の範囲 請求の範囲	· · · · · · · · · · · · · · · · · · ·	1 — 9	<u>.</u>	_ 有 _ 無
·		•			
進歩性(IS)	請求の範囲 請求の範囲		1 – 9	· · · · · · · · · · · · · · · · · · ·	有 無 -
産業上の利用可能性 (IA)	請求の範囲		1-9		_ 有 _ 無

### 2. 文献及び説明

この見解書においては、国際調査報告で提示された以下の文献1-5に基づいて見解を示す。

文献 1 : JP 2001-64248 A (LION CORPORATION), 2001.03.13 文献 2 : JP 8-157894 A (LION CORPORATION), 1996.06.18 文献 3 : JP 9-87700 A (LION CORPORATION), 1997.03.31 文献 4 : JP 10-88197 A (LION CORPORATION), 1998.04.07

文献 5 : JP 11-172299 A (LION CORPORATION), 1999.06.29

#### <新規性について>

上記文献 1-5 のいずれにも、本願の請求の範囲 1 に記載の(1) - (4)の各工程を全て含む  $\alpha$  - スルホ脂肪酸アルキルエステル塩を高濃度含有するパウダー、フレーク又はペレットの製造方法は記載されていない。

したがって、本願の請求の範囲1-9は新規性を有するものである。

#### <進歩性について>

脂肪酸アルキルエステルにスルホン化ガスを接触させてスルホン化し、これを低級アルコールでエステル化した後、漂白、中和を行って $\alpha$ -スルホ脂肪酸アルキルエステル塩含有ペーストを得る工程(本願の請求の範囲1に記載の工程(1)に相当する)は、例えば文献1に記載されているように、従来から知られている(文献1の[0002]-[0014]「従来の技術」及び[図10]を参照)。

一方、 $\alpha$  - スルホ脂肪酸アルキルエステル塩含有ペーストを含有水分1 0 質量%以下のフレーク又はペレットにし、場合により得られたフレーグ又はペレットを平均粒径1 0 0  $\sim$  1,5 0 0  $\mu$  mのパウダーに粉砕する工程(本願の請求の範囲 1 に記載の工程(3)に相当)によって、 $\alpha$  - スルホ脂肪酸アルキルエステル塩を高濃度含有するパウダー、フレーク又はペレットを製造し、このパウダー、フレーク又はペレットを、その他の洗剤成分と混合又は造粒する粒状洗剤の製造方法も既に知られている(例えば、文献 2 の要約、請求項 1-5、 [0 0 1 4] -[0 0 2 3]、 [0 0 2 4] -[0 0 2 7]、文献 3 の要約、請求項 1 -2、

### 第VII欄 国際出願に対する意見

請求の範囲、明細書及び図面の明瞭性又は請求の範囲の明細書による十分な裏付についての意見を次に示す。

本願発明の製造方法は、「(2)得られたペーストを熟成する第1熟成工程」及び「(4)パウダー、フレーク又はペレットを熟成する第2熟成工程」を含んでおり、明細書の第12頁第4行及び第16頁第2行には、「熟成とは、所定温度で所定時間保持することをいう。」と記載され、好適な温度及び時間の範囲が例示されているものの、具体的な温度及び時間の範囲が特定されていないため、上記各「熟成工程」がどのような工程であるのか明確に把握することができない。

#### 補充欄

いずれかの欄の大きさが足りない場合

#### 第 V 欄の続き

[0009] - [0011]、[0015] - [0019]、文献4の要約、請求項1、[0011] - [0015]、[0016] - [0019]、及び文献5の要約、請求項1-2、[0007] - [0010]、[0013] - [0019]、[0027] - [0031]「実施例1-9」[表1-2]を参照)。

上記文献 2-5 に記載の  $\alpha$  ースルホ脂肪酸アルキルエステル塩を高濃度含有するパウダー、フレーク又はペレットの製造方法、及びそれらを含有する粒状洗剤の製造方法において、上記文献 1 に記載の工程により得られた  $\alpha$  ースルホ脂肪酸アルキルエステル塩含有ペーストを用いる程度のことは、当業者であれば容易に想到し得ることであるといえる。

ところで、本願発明の製造方法は、「(2)得られたペーストを熟成する第1熟成工程」と「(4)パウダー、フレーク又はペレットを熟成する第2熟成工程」を含むものであるが、第四欄でも指摘したように、上記各「熟成工程」とはどのような工程であるのか不明確であり、不特定な温度で不特定な時間、単に中間生成物を放置することをも含み得ると認められる。

そうすると、粒状洗剤の製造方法において、ある工程の後、次の工程を開始するまで、中間生成物を一定の温度で数分~数時間保持することは、次の工程の準備の状況等によっては十分あり得ることであるから、上記 α ースルホ脂肪酸アルキルエステル塩含有ペーストを得る工程の後、及び、上記 α ースルホ脂肪酸アルキルエステル塩含有するパウダー、フレーク又はペレットを得る工程の後に、次の工程を開始するまで、中間生成物であるペースト及びパウダー、フレーク又はペレットを、一定の温度で数分~数時間保持することも、当業者にとって自明である。

また、上記 $\alpha$ -スルホ脂肪酸アルキルエステル塩含有ペーストを得る工程において、中和と漂白のどちらを先に行うのかは当業者が適宜選択し得る程度のことに過ぎず、先に中和を行い、中和物を漂白することによって、予測できないような優れた効果が得られるとも認められない。

さらに、粒状洗剤の製造方法として、各洗剤成分を含有するスラリーを噴霧乾燥する方法は周知であり、 粒状洗剤と共通する洗剤成分を混練して固形洗剤とすることにも特段の困難性は見出せない。

したがって、本願の請求の範囲1-9は進歩性を有しないものである。

### <産業上の利用可能性について>

本願の請求の範囲1-9は、洗剤等の分野において産業上の利用可能性を有するものである。

### PATENT COOPERATION TREATY

### From the INTERNATIONAL BUREAU

### PCT

NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY
(CHAPTER I OR CHAPTER II
OF THE PATENT COOPERATION TREATY)

(PCT Rules 44bis.3(c) and 72.2)

To:

KOJIMA, Takashi GINZA OHTSUKA Bldg. 2F 16-12, Ginza 2-Chome Chuo-Ku, Tokyo 1040061 JAPON



Date of mailing (day/month/year) 04 May 2006 (04.05.2006)	PATER! U
Applicant's or agent's file reference FAP-3882	IMPORTANT NOTIFICATION
International application No. PCT/JP2004/008563	International filing date (day/month/year) 11 June 2004 (11.06.2004)
Applicant	LION CORPORATION et al

١.	Transmittal	of the translation	to the applicant.

	The International Bureau transmits herewith a copy of the English translation of the international preliminary report or
ت	patentability (Chapter I).

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

2. Transmittal of the copy of the translation to the designated or elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

### None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Authorized officer

Masashi Honda

Facsimile No.+41 22 338 70 10

### PATENT COOPERATION TREATY

# **PCT**

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference FAP-3882	FOR FURTHER ACTION	See item 4 below	
International application No. PCT/JP2004/008563	International filing date (day/month/year) 11 June 2004 (11.06.2004)	Priority date (day/month/year) 12 June 2003 (12.06.2003)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant LION CORPORATION			

1.	This international preliminary re International Searching Authori	eport on patentability (Chapter I) is issued by the International Bureau on behalf of the ty under Rule 44 bis.1(a).
2.	This REPORT consists of a total	of 6 sheets, including this cover sheet.
	In the attached sheets, any refere to the international preliminary	ence to the written opinion of the International Searching Authority should be read as a reference report on patentability (Chapter I) instead.
3.	This report contains indications	relating to the following items:
	Box No. I	Basis of the report
	Box No. Π	Priority
	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
	Box No. IV	Lack of unity of invention
	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	Box No. VI	Certain documents cited
	Box No. VII	Certain defects in the international application
	Box No. VIII	Certain observations on the international application
4.	The International Bureau will conot, except where the applicant date (Rule 44bis .2).	ommunicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but makes an express request under Article 23(2), before the expiration of 30 months from the priority

Date of issuance of this report 24 April 2006 (24.04.2006)

The International Bureau of WIPO
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1211 Geneva 20, Switzerland

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Date of issuance of this report 24 April 2006 (24.04.2006)

Authorized officer

Masashi Honda

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### PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORI	ITY		"ANS!
Го:			PCT PCT
			RITTEN OPINION OF THE IONAL SEARCHING AUTHORITY
			(PCT Rule 43bis.1)
		Date of mailing (day/month/year)	
Applicant's or agent's file reference		FOR FURTHER A	ACTION
FAP-3882			See paragraph 2 below
International application No. PCT/JP2004/008563	International filing date (a	day/month/year)	Priority date (day/month/year) 12.06.2003
International Patent Classification (IPC) or both	national classification and	IPC	
·			
Applicant			
LION CORPORATION			
This opinion contains indications relati	ing to the following items:		
Box No. I Basis of the c	opinion		
Box No. II Priority			
Box No. III Non-establish	hment of opinion with reg	ard to novelty, inventi	ve step and industrial applicability
Box No. IV Lack of unity	y of invention		
	tement under Rule 43bis. I citations and explanation		novelty, inventive step or industrial ement
Box No. VI , Certain docu	ments cited		
Box No. VII Certain defec	cts in the international app	lication	
Box No. VIII Certain obser	rvations on the internation	al application	
International Preliminary Examining A	Authority ("IPEA") except chosen IPEA has notified	that this does not app	I be considered to be a written opinion of the oly where the applicant chooses an Authority other and under Rule 66.1 bis(b) that written opinions of
If this opinion is, as provided above, written reply together, where appropr PCT/ISA/220 or before the expiration	riate, with amendments,	before the expiration	at the applicant is invited to submit to the IPEA a of 3 months from the date of mailing of Form expires later.
For further options, see Form PCT/ISA	V220.		
3. For further details, see notes to Form P	CT/ISA/220.		
Name and malling address of the 10 AUD		Authorized officer	
Name and mailing address of the ISA/JP		Authorized officer	
·			
Facsimile No.	_	Telephone No.	

International application No.

PCT/JP2004/008563

Box	x No. I	Basis of this opinion
1.		regard to the language, this opinion has been established on the basis of the international application in the language in which it was a unless otherwise indicated under this item.
		This opinion has been established on the basis of a translation from the original language into the following language
	-	Rule 12.3 and 23.1(b)).
2.	With inver	a regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed into this opinion has been established on the basis of:
	a.	type of material
		a sequence listing
		table(s) related to the sequence listing
	b.	format of material
		in written format
		in computer readable form
	c.	time of filing/furnishing
		contained in the international application as filed.
		filed together with the international application in computer readable form.
		furnished subsequently to this Authority for the purposes of search.
3.		In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4.	Addi	itional comments:

International application No.
PCT/JP2004/008563

Box			ule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; pporting such statement	
l.	Statement			
	Novelty (N)	Claims	1-9	YES
		Claims		NO
	Inventive step (IS)	Claims		YES
		Claims	1-9	NO
	Industrial applicability (IA)	Claims	1-9	YES
		Claims		NO

#### Citations and explanations:

This written opinion provides an opinion based on documents 1-5 below presented in the ISR.

Document 1: JP 2001-64248 A (Lion Corporation), 13 March 2001

Document 2: JP 8-157894 A (Lion Corporation), 18 June 1996

Document 3: JP 9-87700 A (Lion Corporation), 31 March 1997

Document 4: JP 10-88197 A (Lion Corporation), 7 April 1998

Document 5: JP 11-172299 A (Lion Corporation), 29 June 1999

### Concerning novelty

None of documents 1-5 describe a method for producing powders, flakes, or pellets containing salts of  $\alpha$ -sulfofatty acid alkyl esters in high concentrations including all of the processes (1) – (4) described in claim 1.

Consequently, claims 1-9 appear to be novel.

#### Concerning inventive step

A process for sulfonating fatty acid alkyl ester by causing contact with sulfonated gas, esterifying the result with a lower alcohol, then bleaching and neutralizing to obtain a paste containing salts of α-sulfofatty acid alkyl esters (corresponding to process (1) described in claim 1) is conventionally known as described in document 1, for example (refer to document 1 (paragraphs 0002-0014, "prior art", and Fig. 10).

A method for producing powders, flakes, or pellets containing salts of  $\alpha$ -sulfofatty acid alkyl esters in high concentrations with a process for making a paste containing salts of  $\alpha$ -sulfofatty acid alkyl esters into flakes or pellets with 10 mass-percent of water or less and in some cases pulverizing the obtained flakes or pellets into a powder with an average particle diameter between 100 and 1500 mµ (corresponding to process (3) described in claim 1), and then producing a granulated detergent by granulating the powder, flakes, or pellets or blending the same with other detergent ingredients is also already known (refer to document

International application No.
PCT/JP2004/008563

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Although the production method of the inventions of the present application include "(2) a first aging process for aging the obtained paste" and "(4) a second ageing process for ageing the powder, flakes, or pellets"; page 12, line 4 and page 16, line 2 of the specification have the description that, "aging refers to maintaining at specified temperature for a specified time", but because no specific range of temperature and time is specified even though a suitable range of time and temperatures is exemplified; it is impossible to grasp clearly what sort of processes each of the above "aging processes" are.

International application No.
PCT/JP2004/008563

Supplemental Box

In case the space in any of the preceding boxes is not sufficient. Continuation of:  $Box\ V$ 

2 (abstract, claims 1-5, paragraphs 0014-0023, and 0024-0027); document 3 (abstract, claims 1-2, paragraphs 0009-0011, and 0015-0019); document 4 (abstract, claim 1, paragraphs 0011-0015, and 0016-0019); and the abstract, document 5 (claims 1-2, paragraphs 0007-0010, 0013-0019, 0021, 0027-0031, examples 1-9, and tables 1-2); for example).

The use of the paste containing salts of  $\alpha$ -sulfofatty acid alkyl esters obtained in the process described in document 1 in the method for producing powders, flakes, or pellets containing salts of  $\alpha$ -sulfofatty acid alkyl esters in high concentrations or the method for producing a granulated detergent containing the same would be easily conceived by a person skilled in the art.

The production method of the invention of the present application includes "(2) a first aging process for aging the obtained paste" and "(4) a second aging process for aging the powder, flakes, or pellets". However, as also pointed out in Box VIII, it is unclear what sort of processes the "ageing processes" are, and this examination finds that this may include allowing the intermediate product to merely sit for an unspecified time at an unspecified temperature.

This being the case, because there is an adequate likelihood that the intermediate product will be held at a fixed temperature from several minutes to several hours between the time one process ends and the next begins in the method for producing a granulated detergent depending on the state of the preparation of the next process, etc., holding the intermediate product paste or the powder, flakes, or pellets from several minutes to several hours before the next process begins after the process for obtaining the paste containing salts of  $\alpha$ -sulfofatty acid alkyl esters and the process for obtaining powder, flakes, or pellets containing salts of  $\alpha$ -sulfofatty acid alkyl esters in high concentrations is obvious to a person skilled in the art.

The matter of whether to neutralize or bleach first in the process for obtaining a paste containing salts of  $\alpha$ -sulfofatty acid alkyl esters is merely a subject matter that would be electively selected by a person skilled in the art. This examination finds that no outstanding effect that cannot be predicted is obtained by carrying out neutralization first and then bleaching the neutralized product.

Further, a method for spray drying a slurry containing detergent ingredients is well known as a method for producing granulated detergents, and this examination finds that there is no particular difficulty in kneading the detergent ingredients common to granulated detergents to form a solid detergent.

Consequently, claims 1-9 do not appear to involve an inventive step.

Concerning industrial applicability

Claims 1-9 have industrial applicability in fields such as detergents.